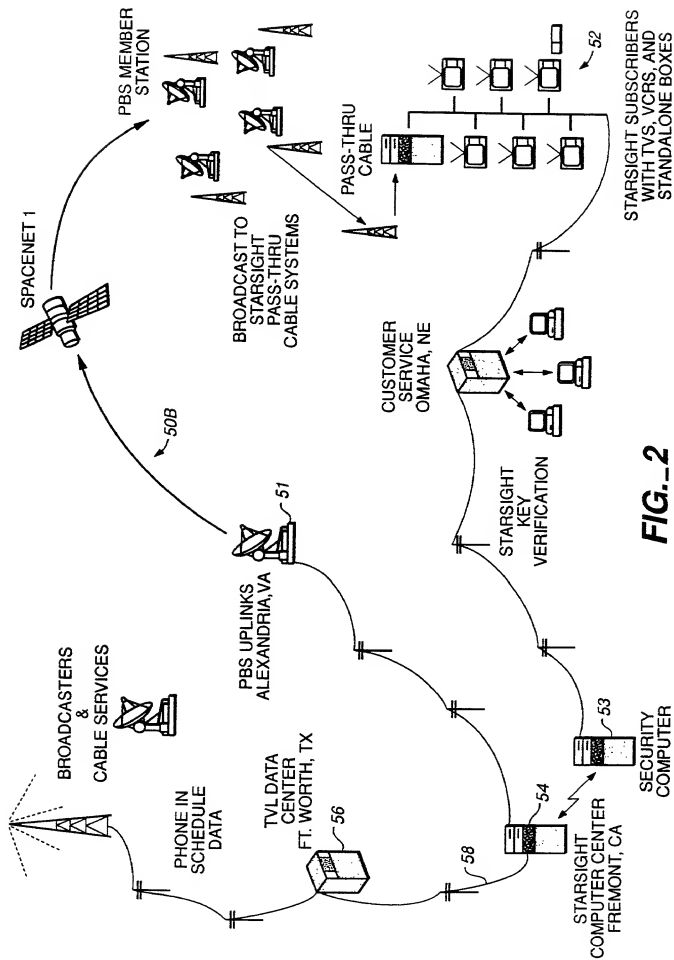
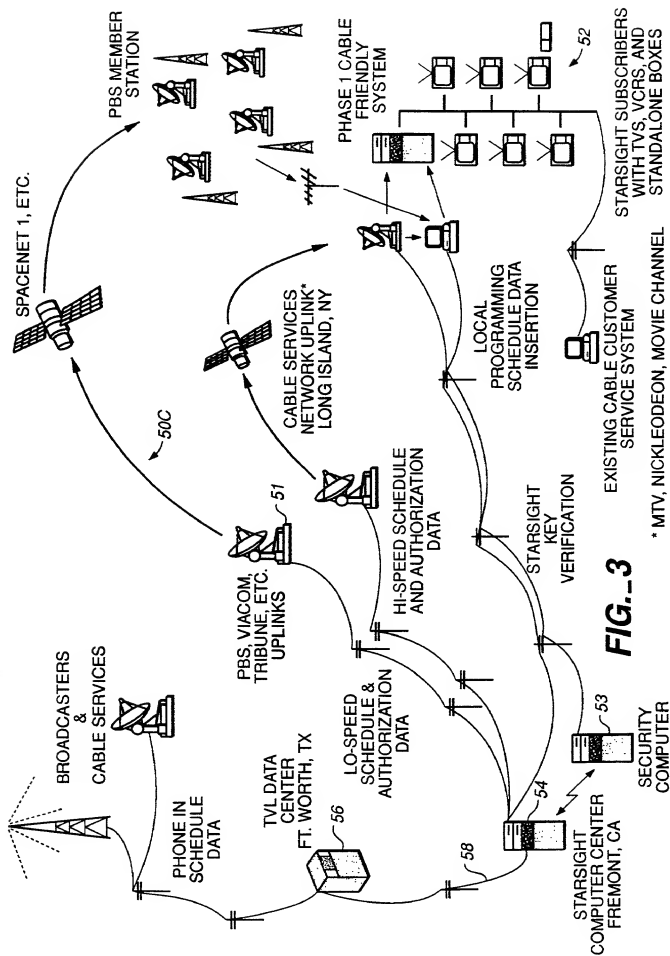


FIG.-1

**FIG. 2**



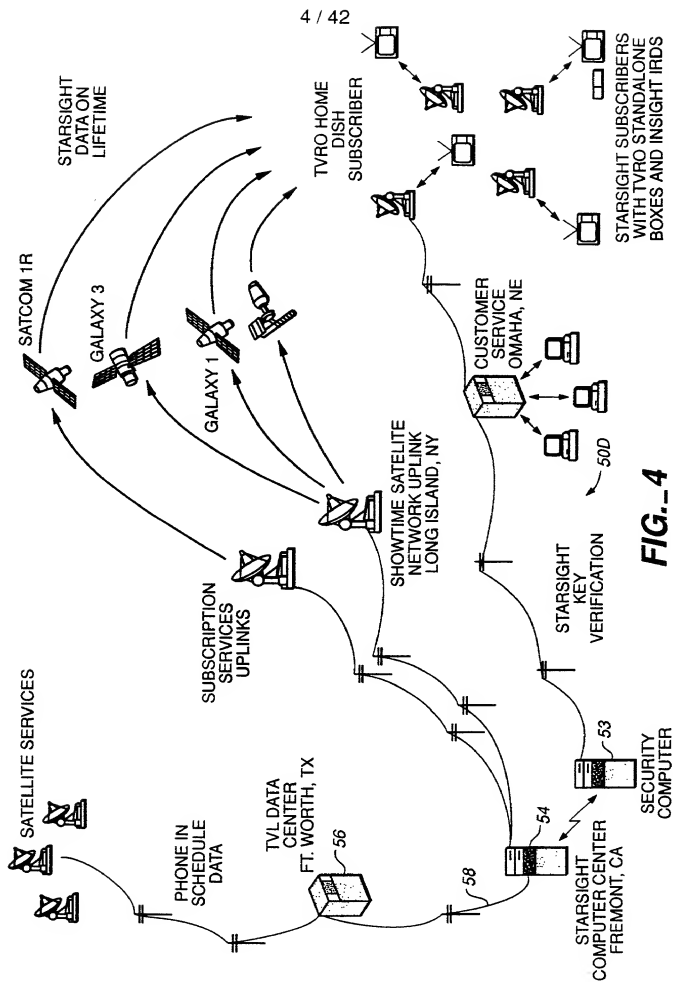
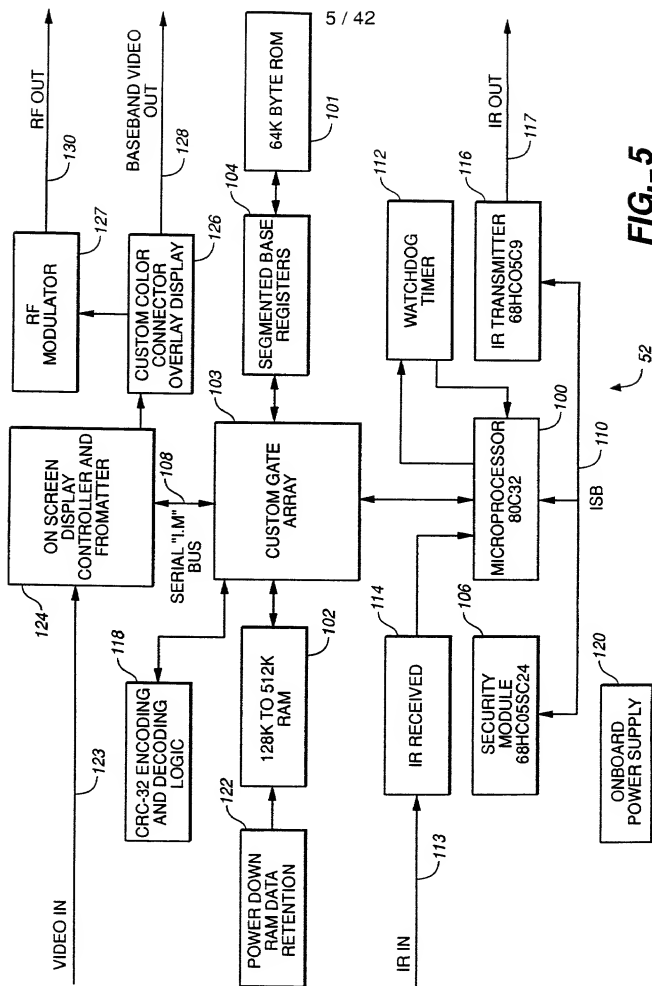
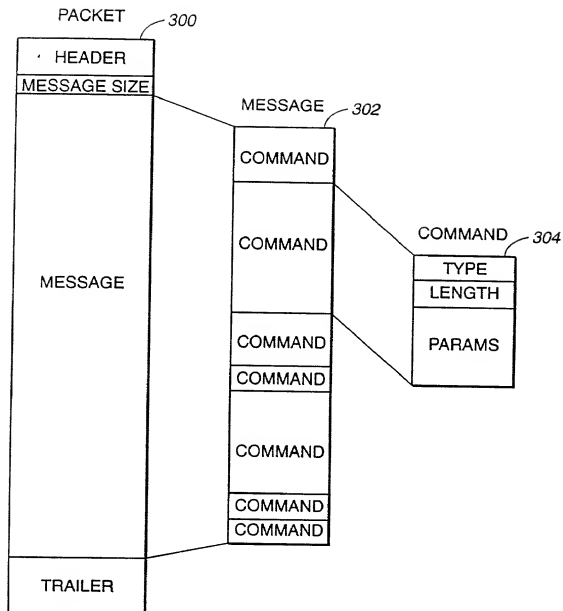
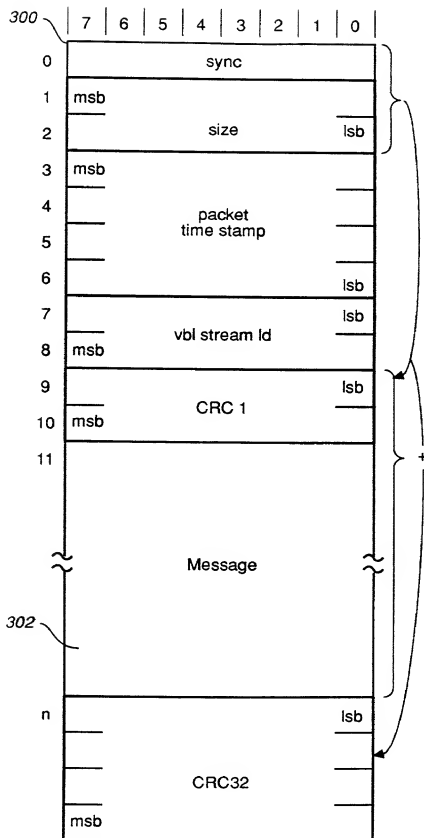


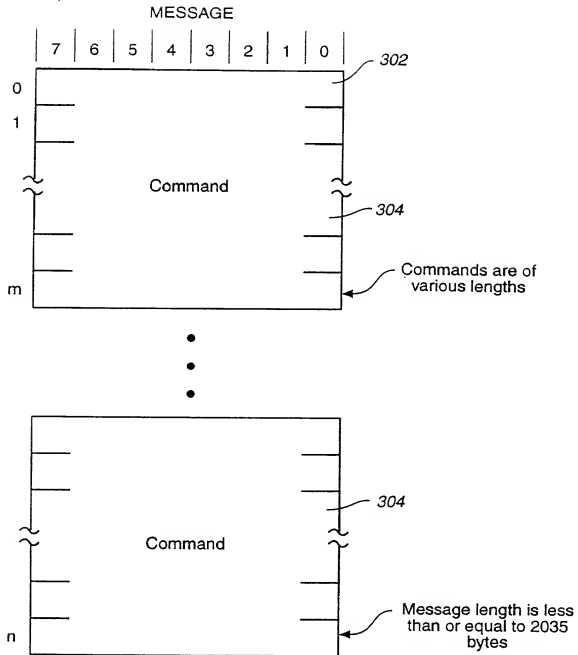
FIG. 4



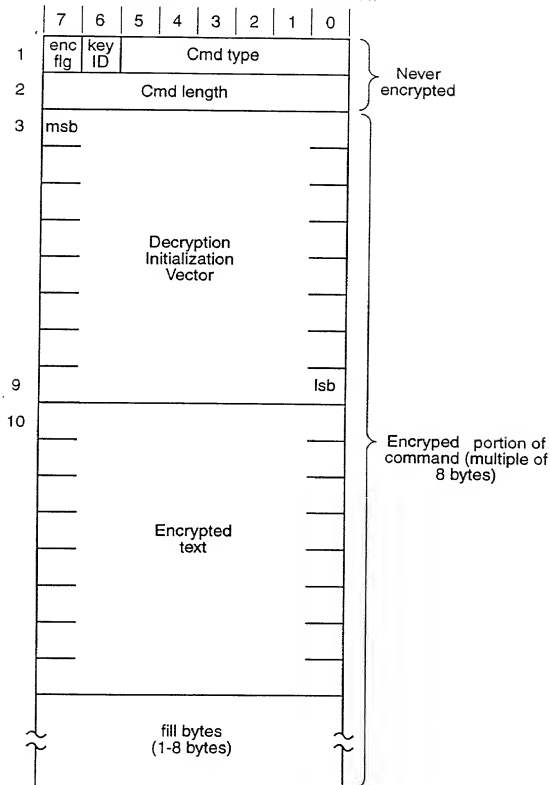
**FIG._6**

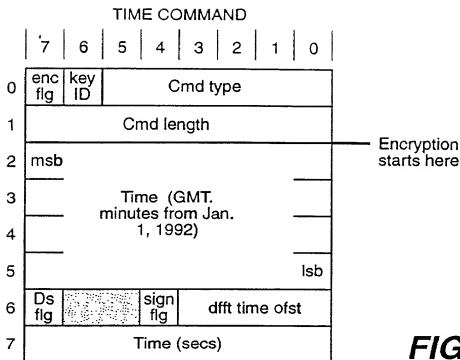
PACKET

**FIG._7**

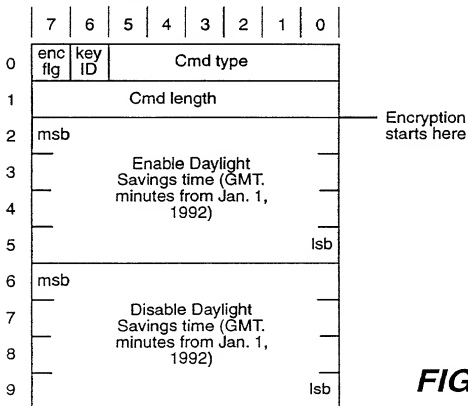
**FIG._8**

GENERAL ENCRYPTED COMMAND FORMAT

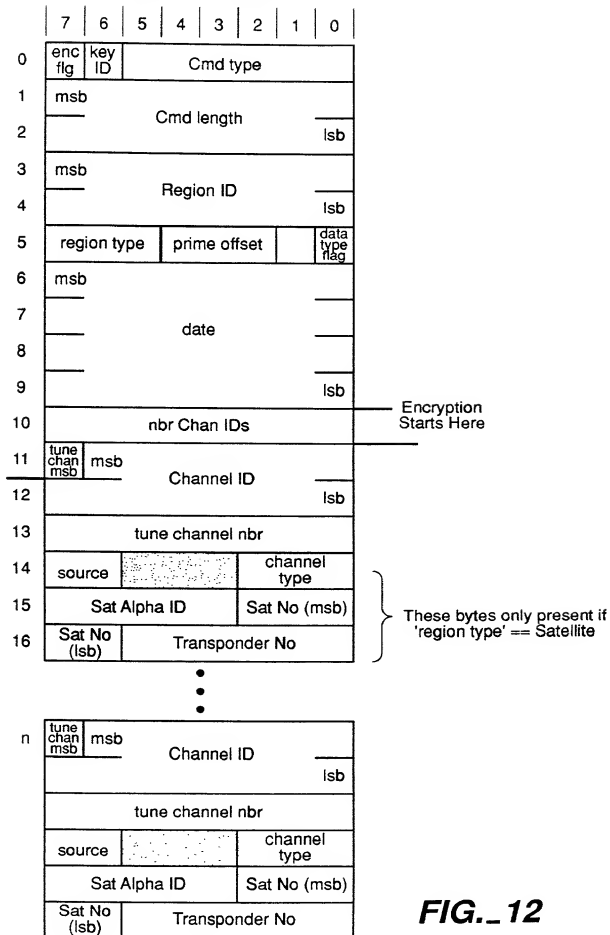
**FIG._9**

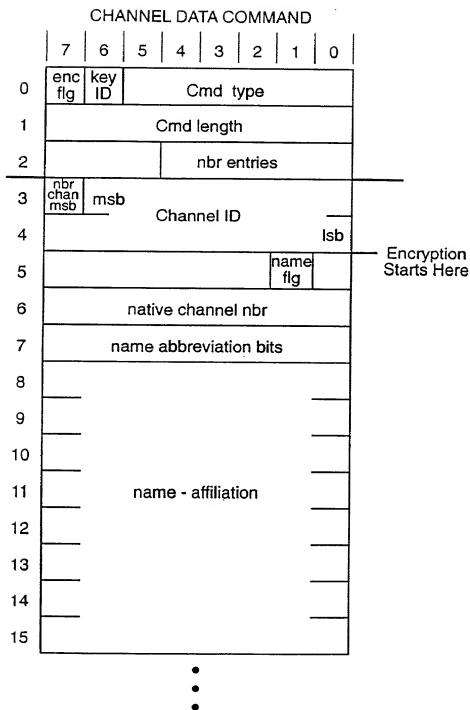
**FIG._ 10**

DAYLIGHT SAVING TIME CHANGE COMMAND

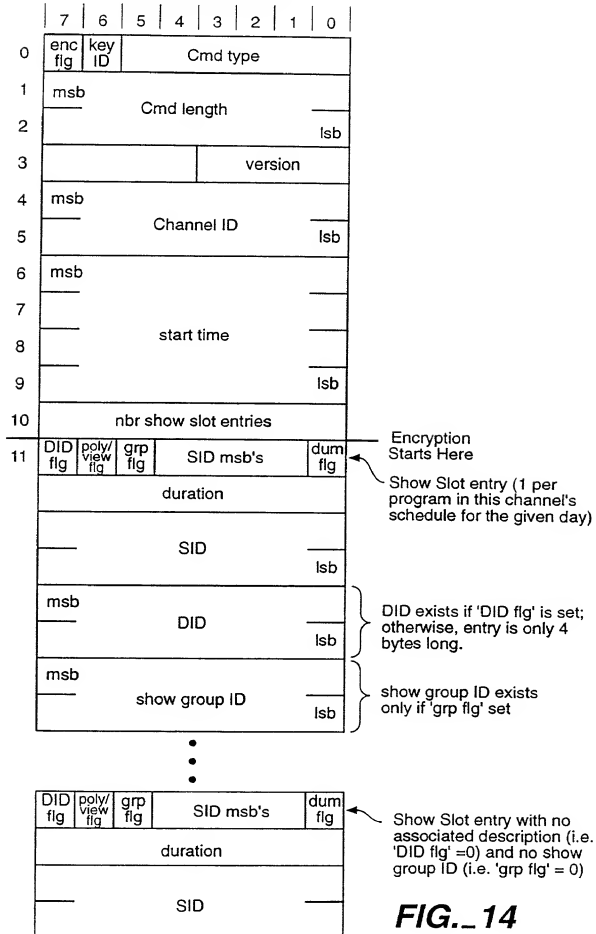
**FIG._ 11**

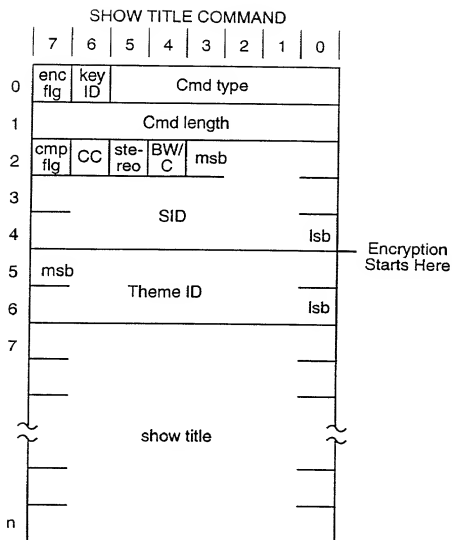
REGION COMMAND

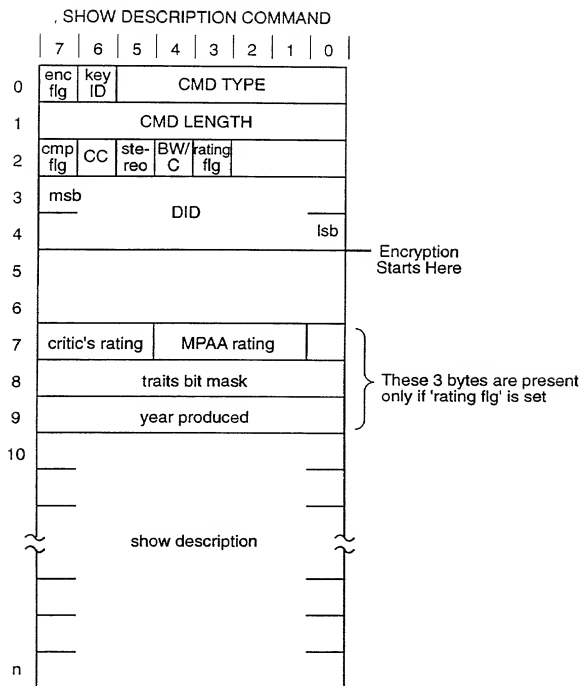
**FIG. 12**

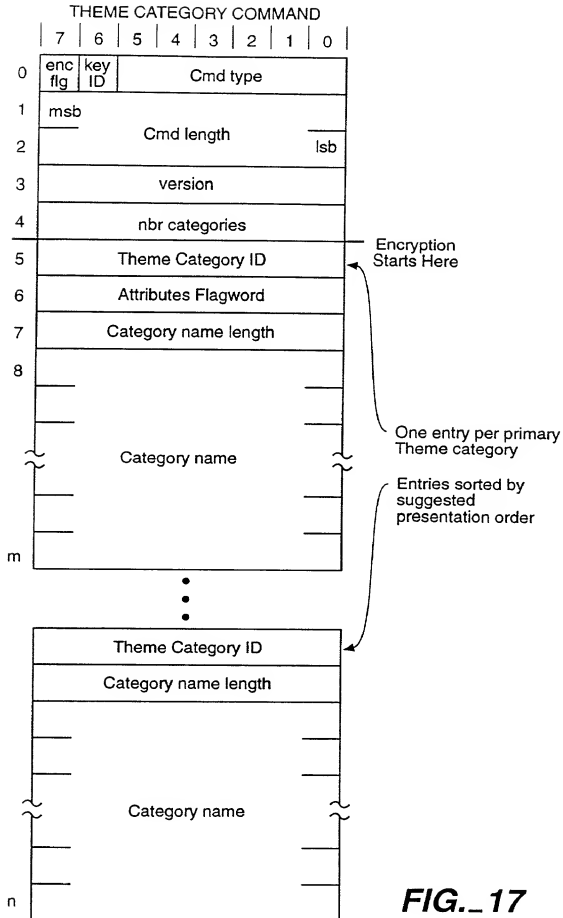
**FIG._ 13**

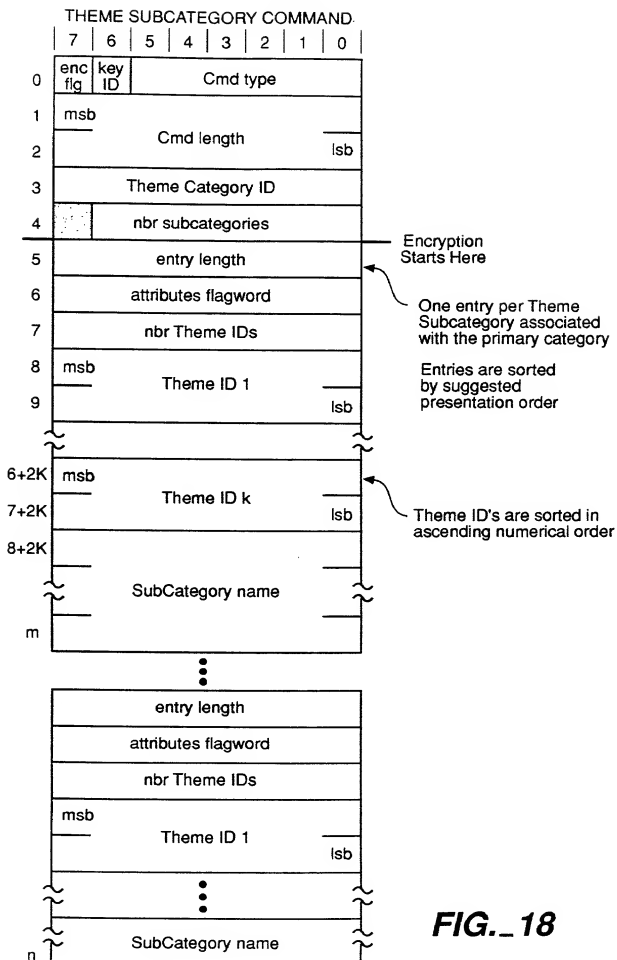
SHOWLIST COMMAND

**FIG. 14**

**FIG._15**

**FIG._16**

**FIG._17**



SUBSCRIBER UNIT RESET COMMAND

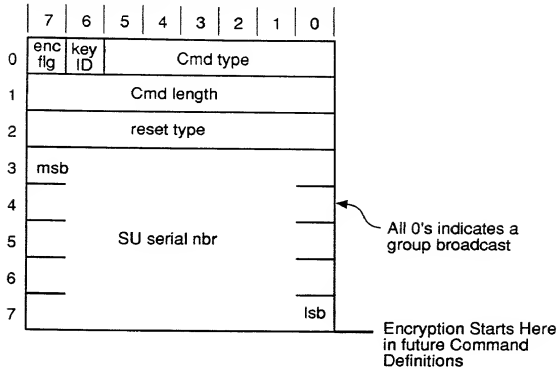


FIG._19

AUTHORIZATION COMMAND

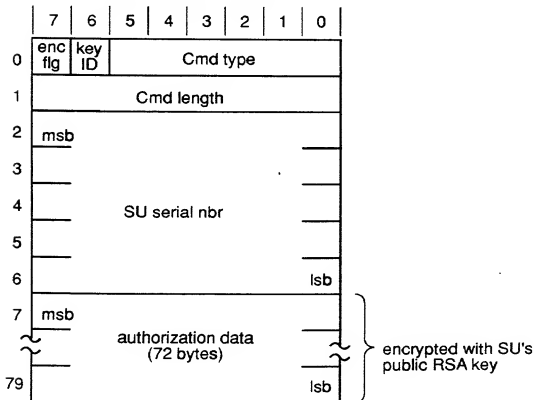


FIG._20

AUTHORIZATION COMMAND 'AUTHORIZATION
FIELD'(NOT ENCRYPTED)

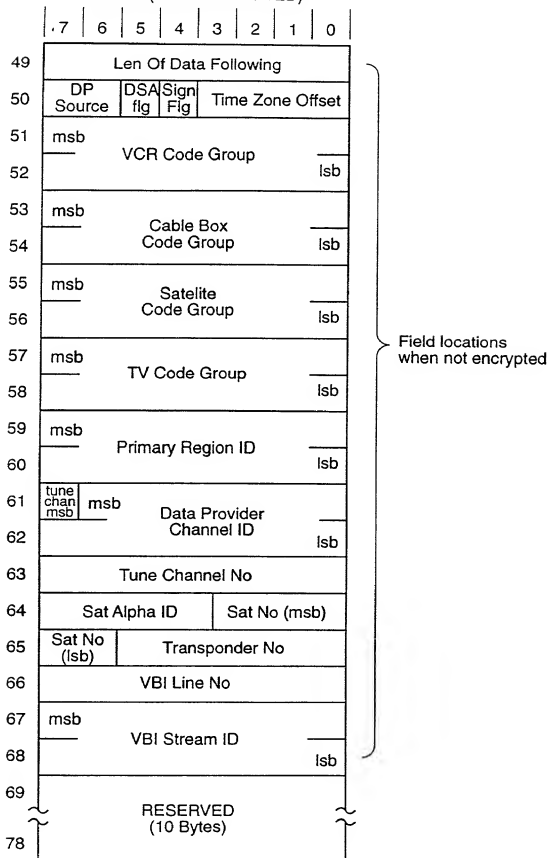


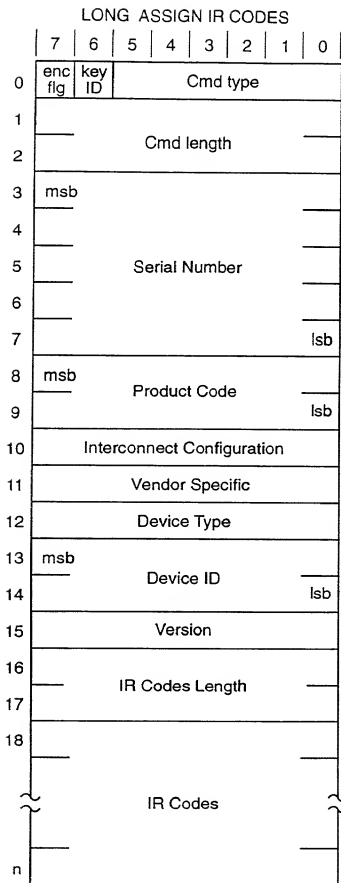
FIG._21

AUTHORIZATION COMMAND 'AUTHORIZATION
FIELD'(NOT ENCRYPTED)

	7	6	5	4	3	2	1	0
49	Len Of Data Following							
50	DP Source		DSA flg	Sign Flg	Time Zone Offset			
51	msb							
52	VCR Code Group							lsb
53	msb							
54	Cable Box Code Group							lsb
55	msb							
56	Satellite Code Group							lsb
57	msb							
58	TV Code Group							lsb
59	msb							
60	Primary Region ID							lsb
61	tune chan msb	msb						
62	Data Provider Channel ID							lsb
63	Tune Channel No							
64	Sat Alpha ID				Sat No (msb)			
65	Sat No (lsb)		Transponder No					
66	VBI Line No							
67	msb							
68	VBI Stream ID							lsb
69	RESERVED (10 Bytes)							
78								

Field locations
when not encrypted

FIG._22



Serial Number = 0
means command applies
to all units having a
matching Product Code,
Device Type, and Device
ID.

Interconnect Configuration =
0xFF means keep the user's
current interconnect
configuration.

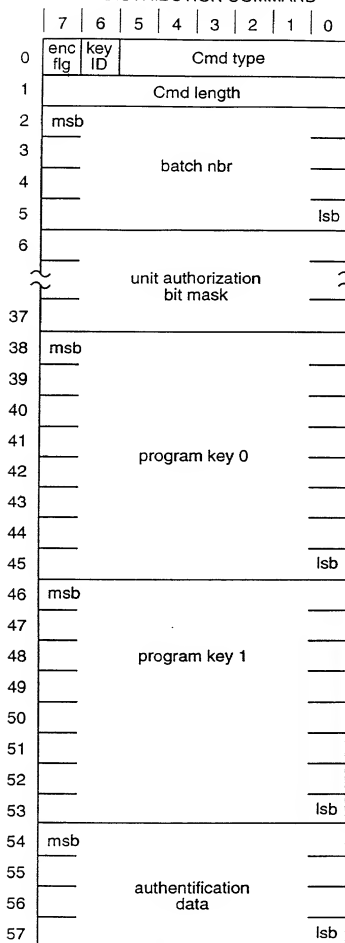
Vendor Specific field value
depends on the Product
Code. E.g. for Zenith TVs
this is the Tune Method.

IR Codes Length = 0 means set
the appropriate code group and
system interconnect
configuration values only. i.e.
don't download IR codes to the
URC chip.

Structure within the IR Codes
field is determined by the
Universal Remote Control chip
vendor.

FIG._23

22 / 42
KEY DISTRIBUTION COMMAND

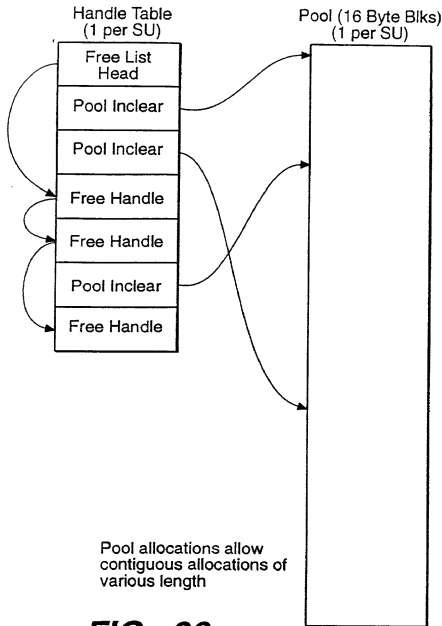
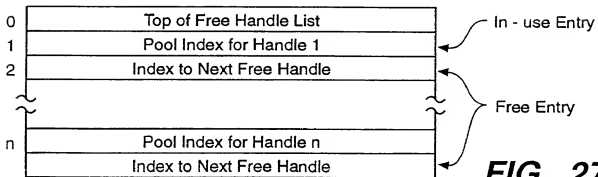


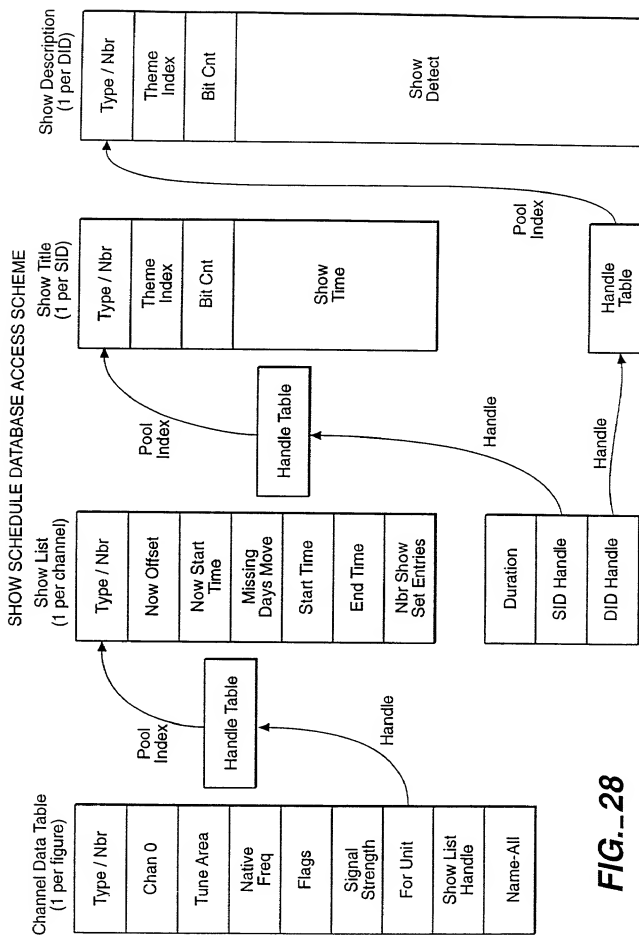
encrypted with
batch key

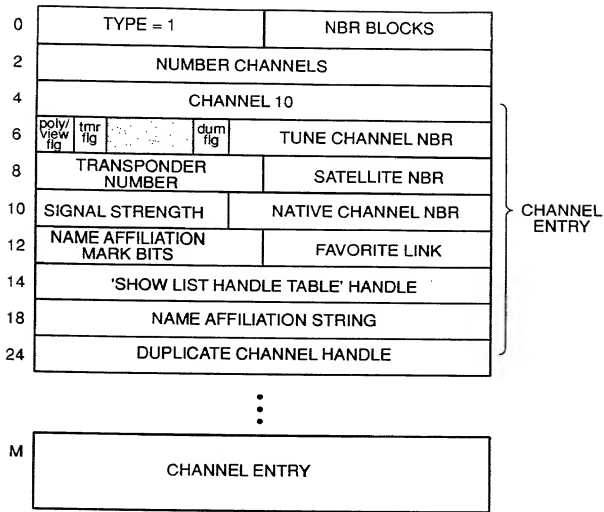
authentication uses
authorization bit mask
and both program keys

FIG._24

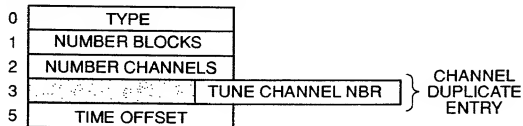
DATABASE MEMORY POOL ACCESS SCHEME

**FIG._26****FIG._27**

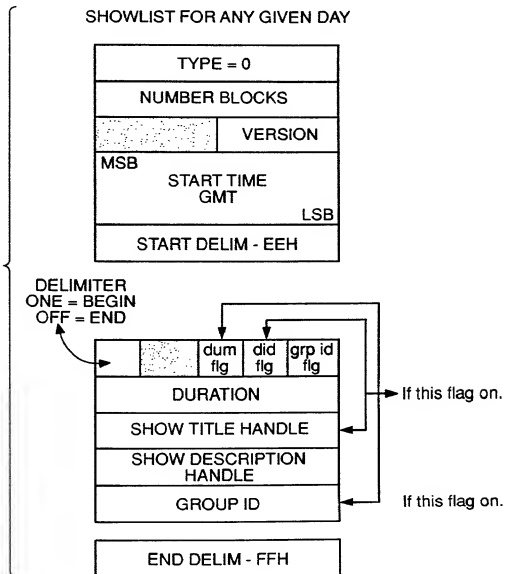
**FIG..28**

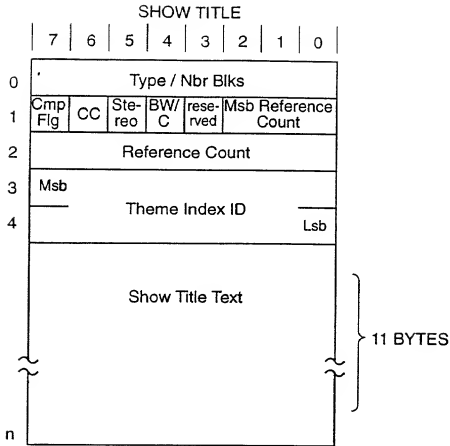
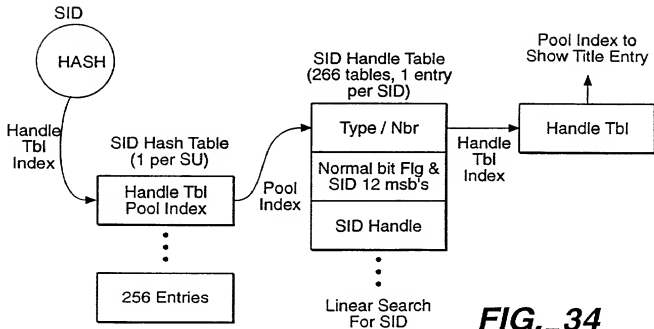
**FIG._29**

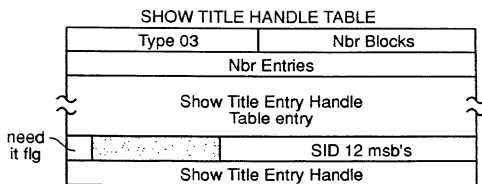
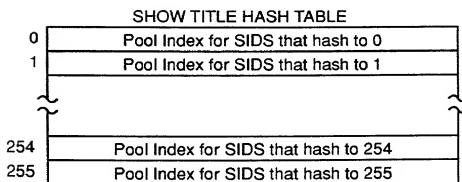
CHANNEL DUPLICATES TABLE

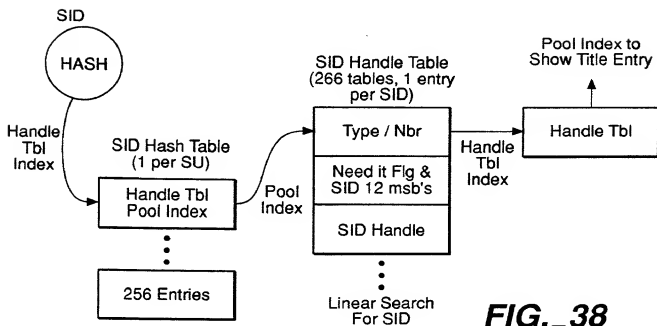
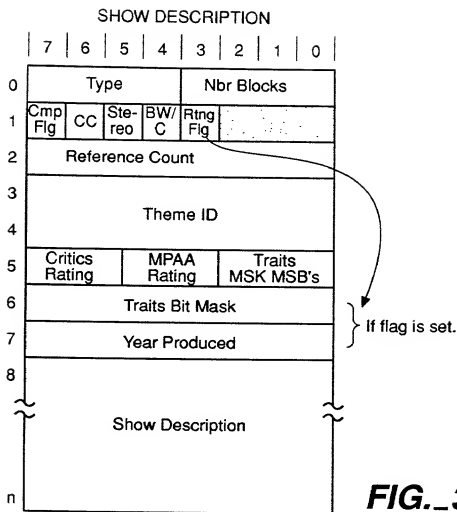
**FIG._30**

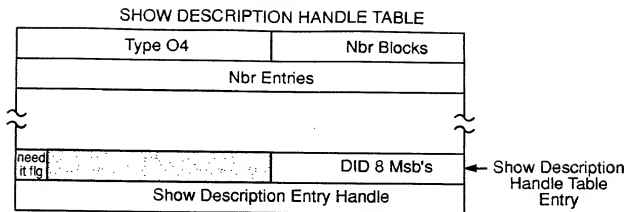
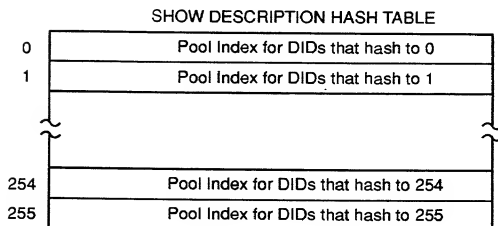
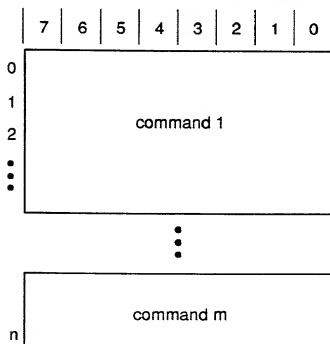
TYPE / NBR BLOCKS
REFERENCE COUNT
MONDAY SHOW LIST HANDLE
TUESDAY SHOW LIST HANDLE
WEDNESDAY SHOW LIST HANDLE
THURSDAY SHOW LIST HANDLE
FRIDAY SHOW LIST HANDLE
SATURDAY SHOW LIST HANDLE
SUNDAY SHOW LIST HANDLE

FIG._31**FIG._32**

**FIG._33****FIG._34**

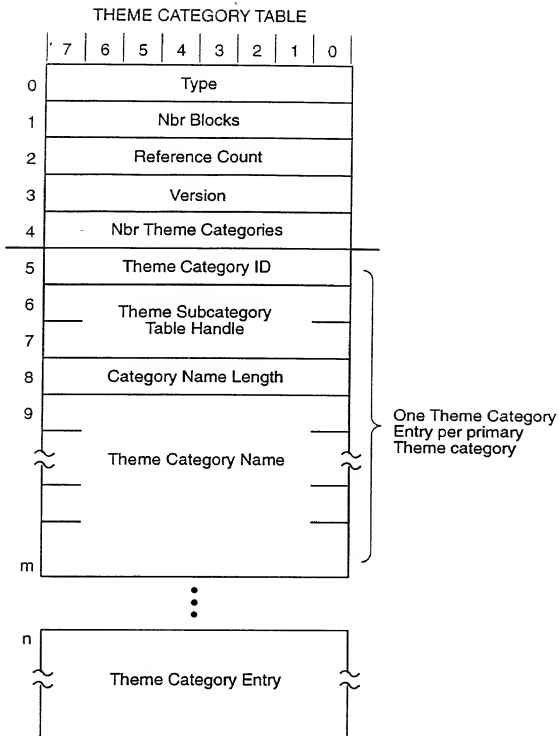
**FIG._35****FIG._36**

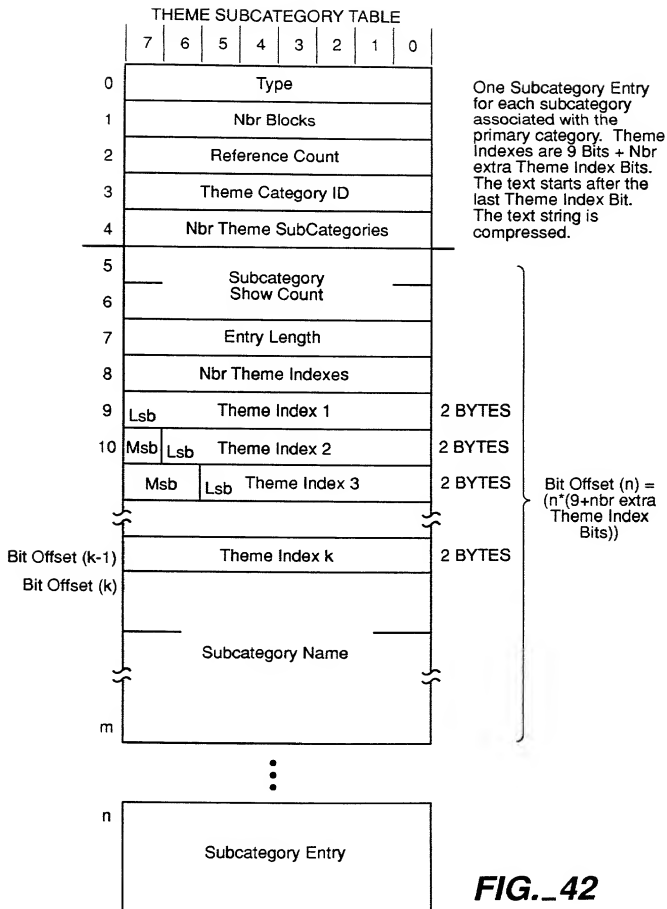


**FIG._39****FIG._40****I / O PROCESSOR COMMAND PACKET**

Packet lengths will never
exceed 512 bytes.

FIG._43

**FIG._41**



DRAW RECTANGLE


	7	6	5	4	3	2	1	0
0				Cmd type				
1	shadow width				shadow height			
2	shadow color 1				shadow color 2			
3	small font delta X				small font delta Y			
4	large font delta X							
5	large font delta Y							
6	highlight 1				highlight 2			
7	underline 11				underline 12			
8	underline 21				underline 22			

FIG._44

ERASE SCREEN

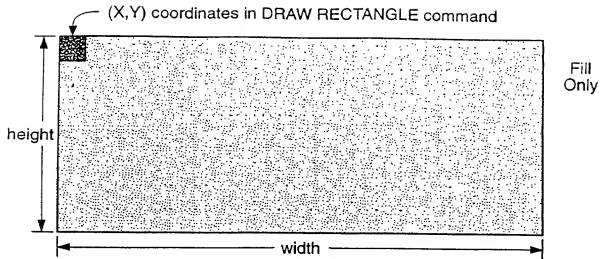
	7	6	5	4	3	2	1	0
0	Cmd type							
1	xpar color							

FIG._45

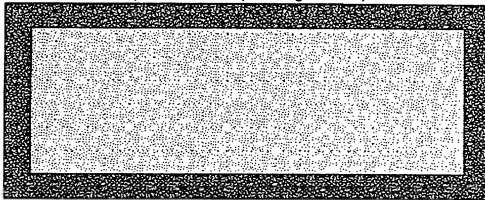
DRAW RECTANGLE

	7	6	5	4	3	2	1	0
0	Cmd type							
1	upper left X							
2	upper left Y							
3	width							
4	height							
5	fill color 1				fill color 2			
6	outline color 1				outline color 2			
7	fill	out-line	shadow	emboss				

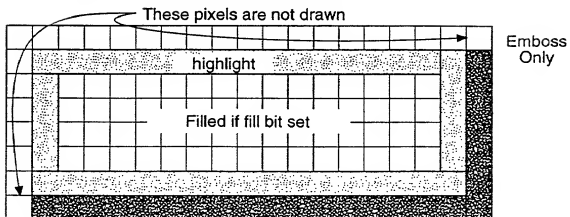
FIG._46

**FIG._47A**

Fill and Outline
(outline is one pixel high / wide)

**FIG._47B**

(highlight and underlines are one pixel high / wide)

**FIG._47C**

Outline, Fill, and Emboss

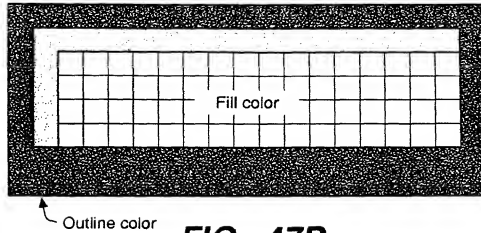


FIG._47D

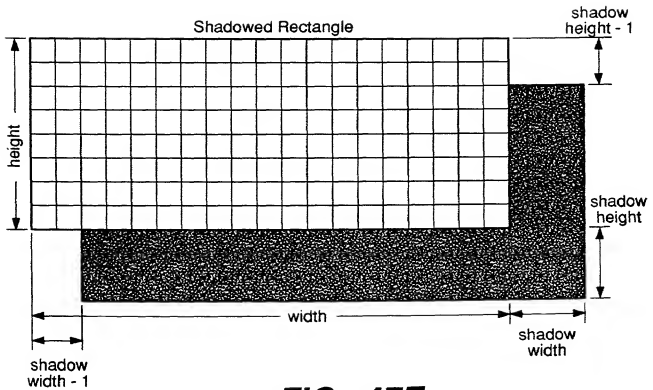


FIG._47E

SAVE RECTANGLE								
	7	6	5	4	3	2	1	0
0			Cmd type					
1	upper left X							
2	upper left Y							
3	width							
4	height							
5					pop-up ID			

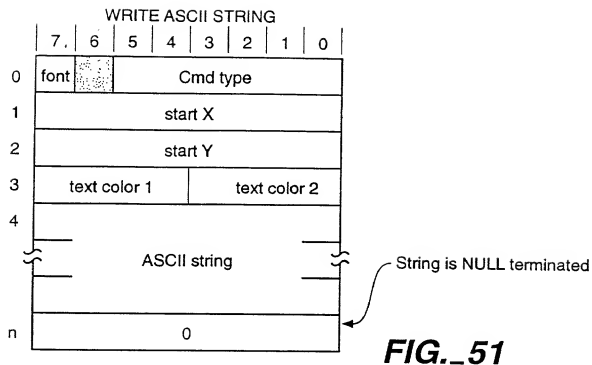
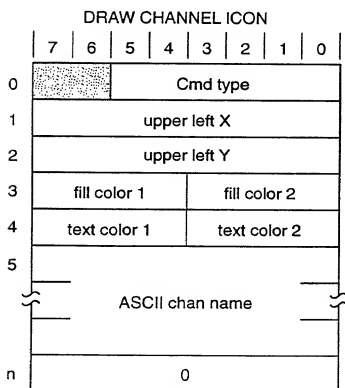
FIG._48

RESTORE RECTANGLE									
	7	6	5	4	3	2	1	0	
0			Cmd type						
1	upper left X								
2	upper left Y								
3	save				pop-up ID				

FIG._49

MOVE RECTANGLE VERTICALLY								
	7	6	5	4	3	2	1	0
0			Cmd type					
1	upper left X							
2	upper left Y							
3	width							
4	height							
5	scroll size							
6	delay							

FIG._50

**FIG._51****FIG._52**

CHANNEL ICON WHEN TEXT STRING = 1 OR 2 CHARACTERS
(X,Y) in Draw Channel icon command

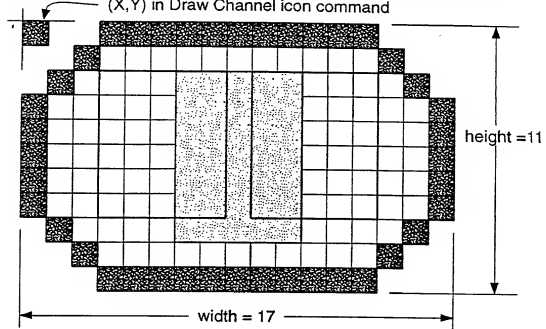


FIG._53A

CHANNEL ICON WHEN TEXT STRING = 3 CHARACTERS

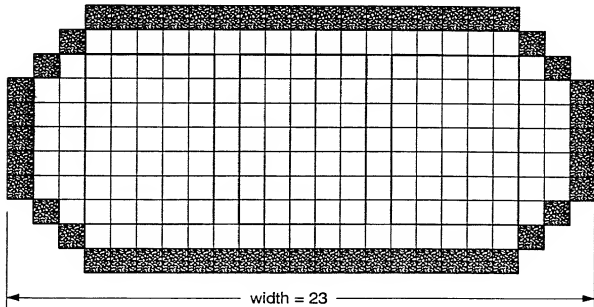


FIG._53B

CHANNEL ICON WHEN TEXT STRING = 4 CHARACTERS

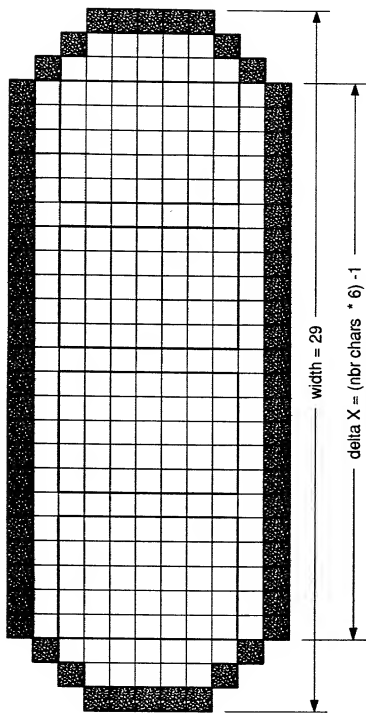


FIG._53C

DISABLE TRANSPARENT COLOR

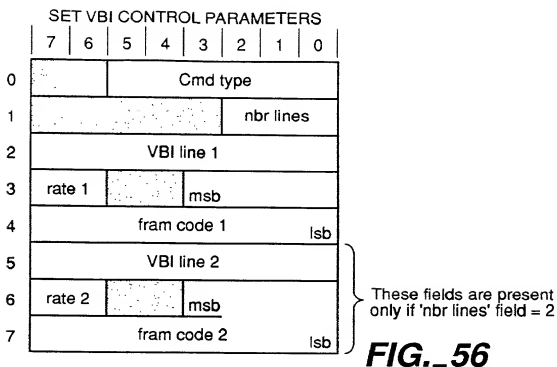
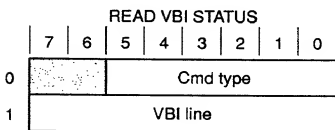
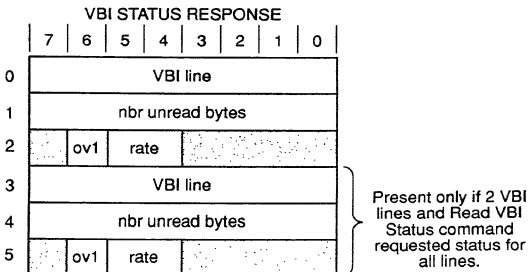
7	6	5	4	3	2	1	0
Cmd type							
0							

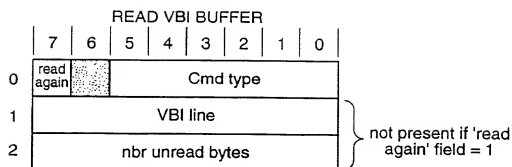
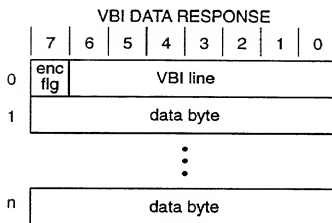
FIG._54

STOP VBI

7	6	5	4	3	2	1	0
Cmd type							
0							

FIG._55

**FIG._56****FIG._57****FIG._58**

**FIG._59****FIG._60**